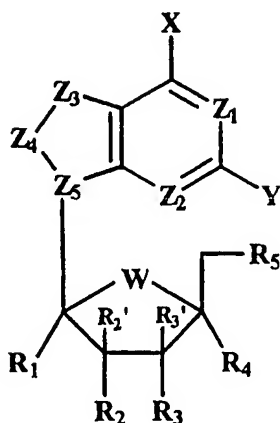


We claim:

1. A compound having a structure according to Formula I:



Formula I

wherein at least one of  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_2'$  and  $R_3'$  is  $OR'''$ , where  $R'''$  is  $-C(O)R^a$  or a racemic, L, or D amino acid group  $-C(O)CHNH_2R^a$ , and  $R^a$  is a substituted or unsubstituted alkyl; where remaining  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_2'$  and  $R_3'$  are independently selected from H, OH,  $NH_2$ , F, Cl, Br, I,  $N_3$ ,  $-CN$ ,  $OR'$ ,  $-NR'_2$ ,  $-SR'$ ,  $-NHNH_2$ ,  $-NHOH$ , CHO,  $COOR'$ ,  $CONR'_2$ , alkyl, alkenyl, alkynyl, aryl, aralkyl, substituted alkyl, substituted alkenyl, substituted alkynyl, substituted aryl, substituted aralkyl, where the substituent is selected from F, Cl, Br, I,  $N_3$ ,  $-CN$ ,  $-OR''$ ,  $NO_2$ ,  $-NR''_2$ ,  $SR''$ ,  $-NHNH_2$ ,  $-NHOH$ ,  $COOR'$ ,  $CONR''_2$ , and where  $R'$  and  $R''$  are H, alkyl, alkenyl, alkynyl, aryl, aralkyl;

$W = O, S, CH_2, Se$ ;

$Z_1, Z_2$ , are independently selected from N, C, CH;

$Z_3, Z_4, Z_5$  are independently selected from the group consisting of  $-CR-$ ,  $NR-$ ,  $-O-$ ,  $-S-$ ,  $-Se-$ ,  $-C=O$ ,  $-C=S$ ,  $-S=O$ ,  $-CR=CR-$ ,  $-CR=N-$ ,  $-N=N-$ , where R is selected from the group consisting of H, F, Cl, Br, I,  $N_3$ ,  $-CN$ ,  $-OR'$ ,  $-NR'_2$ ,  $-SR'$ ,  $-NHNH_2$ ,  $-NHOH$ ,  $-NO_2$ , CHO,  $COOR'$ ,  $CONH_2$ ,  $-C(O)-NH_2$ ,  $-C(S)-NH_2$ ,  $-C(NH)-NH_2$ ,  $-C(NO_2)-NH_2$ ,  $=O$ ,  $=NH$ ,  $=NHOH$ ,  $=NR$ , alkyl, alkenyl, alkynyl, aryl, aralkyl, substituted alkyl, substituted alkenyl, substituted alkynyl, substituted aryl, substituted aralkyl, where the substituent is selected from H,  $-OH$ ,  $NH_2$ , F, Cl, Br, I,  $N_3$ ,  $-CN$ ,  $-COOR''$ ,  $-CONR''_2$ ,

OR", -NR"<sub>2</sub>, -SR", -NHNH<sub>2</sub>, -NHOH, -NO<sub>2</sub>, and R', R" are H, alkyl, alkenyl, alkynyl, aryl, aralkyl, acetyl, acyl, sulfonyl;

The Chemical bond between Z<sub>3</sub> and Z<sub>4</sub> or Z<sub>4</sub> and Z<sub>5</sub> is selected from C-C, C=C, C-N, C=N, N-N, N=N, C-S, N-S;

- 5 X and Y are independently selected from the group consisting of H, OH, NH<sub>2</sub>, F, Cl, Br, I, N<sub>3</sub>, -S-NH<sub>2</sub>, -S(O)-NH<sub>2</sub>, -S(O)NH<sub>2</sub>, -CN, -COOR', -CONR'<sub>2</sub>, -OR', -NR'<sub>2</sub>, -SR', -NHNH<sub>2</sub>, -NHOH, alkyl, alkenyl, alkynyl, aryl, aralkyl, substituted alkyl, substituted alkenyl, substituted alkynyl, substituted aryl, substituted aralkyl, where the substituent is selected from F, Cl, Br, I, N<sub>3</sub>, -CN, -OR", NO<sub>2</sub>, -NR"<sub>2</sub>, SR", -NHNH<sub>2</sub>, -NHOH, and
- 10 R', R", are H, alkyl, alkenyl, alkynyl, aryl, aralkyl.